

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY  
(SUPPLEMENTARY PAGES)

PCT/DE2004/001702

**Re Point III.**

The Search Report was limited to invention 1.

**Re Point IV.**

The different inventions/groups of inventions are:

**INVENTION 1: 1-10**

Method for manufacturing and/or repairing components by laser-powder build-up welding using a substructure which is enclosed at least in sections by the built-up powder material.

**INVENTION 2: 11, 12**

Method for manufacturing and/or repairing components by laser-powder build-up welding using different powder materials.

For the following reasons, these inventions/groups do not cohere in such a way as to implement a single general inventive idea (Rule 13.1 PCT) :

**EXPLANATIONS:**

Reference is made to the following document:

D1: DE 199 03 436 A (FRAUNHOFER GES FORSCHUNG) August 24, 2000 (2000-08-24)

D1 represents the related art. D1 discloses a method for manufacturing and/or repairing components, particularly blades and blade segments, for (gas) turbines, particularly for aircraft engines, by laser-powder build-up welding.

D1 also discloses (implicitly) the objective provided by the applicant, that is, "a novel method for manufacturing and/or

✓ repairing components for (gas) turbines", which is why this objective can no longer be considered as a single general inventive idea.

**INVENTION 1:**

Based on a comparison of the published related art with the features of Claims 1, the following features (special technical features (STFs), (Rule 13.2 PCT)) may be regarded as a contribution to the related art:

"using a substructure which is enclosed at least in sections by the built-up powder material".

From this the following objective task may be derived:

"invention of a novel method for manufacturing/or repairing components for gas turbines"

**Invention 2:**

From comparing the published related art with the features of Claims 11, the following STFs (Rule 13.2 PCT) may be regarded as a contribution to the related art:

"using different powder materials"

From this the following objective task may be derived:

"constructing subassemblies, particularly blades, for gas turbines from different metal alloys and optimizing the properties of the same"

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The analysis performed above proves that there is no technical connection between the STFs of the inventions which would find expression in one or more identical or corresponding technical features. The prerequisites of Rules 13.1 and 13.2 PCT are therefore not satisfied and thus the unity of the invention is not fulfilled.

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✓ Moreover, the 2 groups of claims are not connected by a single common technical STF and thus define 6 different inventions.

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The application relates to a plurality of inventions or groups of inventions in the sense of Rule 13.1 PCT. These were divided as described above. If the applicant pays additional fees for a (or multiple) group(s) of inventions for which currently no search has yet been conducted, then the additional search(es) could reveal another related art to prove another lack of unity 'a posteriori' within one (or several of the) group(s) for which no search has yet been conducted. In this case, only the first invention within this group/each of these groups of inventions, for which a lack of unity of the inventions is determined, will become subject to a search. No further request for payment of additional fees will be issued. The reason for this is that Article 17(3) PCT stipulates that the ISA is to prepare the International Search Report for those parts of the international application that relate to the invention mentioned first in the claims ('main invention') and for those parts that relate to those inventions for which additional fees have been paid. Neither the PCT agreement nor the PCT guidelines provide a legal basis for additional requests for payment of additional search fees (W17/00, Point 11 and W1/97, Points 11-16).

**Re Point V.**

1 In the present opinion, reference is made to the following documents:

D2: PATENT ABSTRACTS OF JAPAN, Vol. 1999, No. 02,  
February 26, 1999 (1999-02-26) & JP 10 296470 A  
(NISSAN MOTOR CO LTD), November 10, 1998 (1998-11-  
10)

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D3: US 5,233,150 A (BRAUN OLIVIER ET AL) August 3, 1993  
(1993-08-03)

D4: DE 195 47 903 C (MOTOREN TURBINEN UNION) March 20,  
1997 (1997-03-20)

**2 INDEPENDENT CLAIM 1**

2.1 The present patent application does not satisfy the requirements of Article 33(1) PCT, because the subject matter of Claim 1 is not novel in the sense of Article 33(2) PCT.

Document D2 discloses (the references in parentheses relate to this document)

a method for manufacturing and/or repairing components by laser-powder build-up welding, the laser-powder build-up welding being performed by using at least one substructure (1), the material build-up by a powder material occurring in the process of laser-powder build-up welding in such a way that the or every substructure (1) is enclosed at least in sections by the built-up powder material.

**3 DEPENDENT CLAIMS 2-10**

The above-mentioned dependent claims relate to minor structural changes of the method as recited in Claim 1 which lie within the scope of measures one skilled in the art normally takes on the basis of considerations familiar to him/her. Consequently, the subject matter of these claims is not based on an inventive activity.